



Texas Department of Health
Zoonosis Control Division
1100 West 49th Street
Austin, Texas 78756

1997 Severe Attack Surveillance Summary

During 1997, a total of 729 severe animal attacks or bites were voluntarily reported to the Zoonosis Control Division of the Texas Department of Health by local health departments, law enforcement agencies, animal control agencies, and emergency health care providers. A “severe attack” is defined as one in which the animal repeatedly bites or vigorously shakes its human victim, and the victim, or a person intervening, has extreme difficulty terminating the attack. A “severe bite” is defined as a puncture or laceration made by an animal’s teeth which breaks the person’s skin, resulting in a degree of trauma which would cause most prudent and reasonable people to seek medical care for treatment of the wound, without consideration of rabies prevention alone. Reports were submitted from 88 of Texas’ 254 counties (Figure 1).

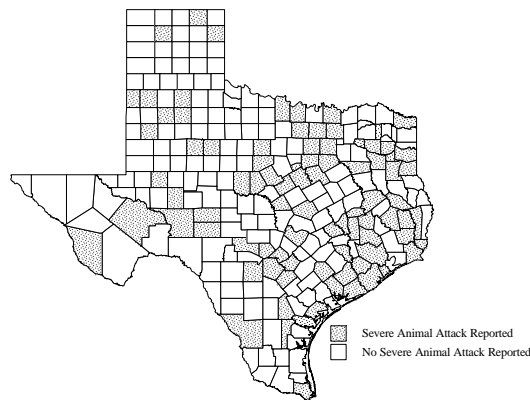


Figure 1. Severe Animal Attack reports by County - 1997

Species

Species reported to be involved in severe attacks were domestic dog (620 reports, 85.0%); domestic cat (86 reports, 11.8%); unknown (7 reports, 1.0%); raccoon and rat (3 reports each, 0.4% each); horse and wolf-dog hybrid (2 reports each, 0.3% each); and bat, fox, gerbil, mouse, pig, and tiger (1 report each, 0.1% each).

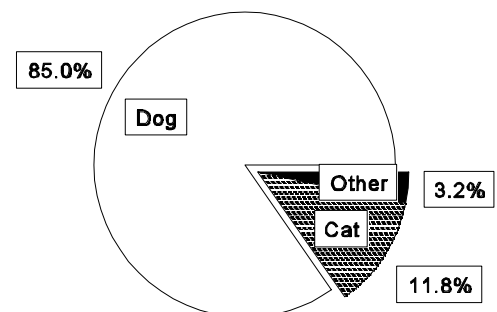


Figure 2. Species involved in severe animal attacks - 1997

Canine Breed

The specific breed of canine was listed in 586 reports. Of the 90 breeds and breed crosses reported, 8 breeds and breed crosses constituted over half (51.0%) of the reports (Table 1). (Note: the number of animals in various dog breeds in the overall canine population is unknown; therefore, no conclusions can be drawn concerning whether dogs of these 8 breeds are prone to bite more often than other breeds or if these are merely the more popular breeds.) No other breeds or breed crosses represented more than 3% of the reports. Small breeds of dogs were infrequently reported because they are less likely than large breeds to inflict severe wounds.

<u>Breed</u>	<u>No.</u>	<u>%</u>
Chow chow	64	10.9
Rottweiler	40	6.8
Pit bull	39	6.7
German shepherd	35	6.0
Mixed	34	5.8
Chow cross	34	5.8
Labrador retriever cross	28	4.8
German shepherd cross	25	4.3
All others	287	49.0

Table 1. Breeds of canines reported in severe animal attacks - 1997

Animal's Sex

In attacks involving canines (domestic dogs and wolf-dog hybrids), the animal's sex was specified in 555 reports. Of the 103 female canines whose reproductive status was specified, 26 (25.2%) were spayed and 77 (74.8%) were intact. Of the 260 male canines whose reproductive status was known, 37 (14.2%) were castrated and 223 (85.8%) were intact (Figure 3). (Note: the proportion of sterilized versus intact animals in the overall canine population is unknown.)

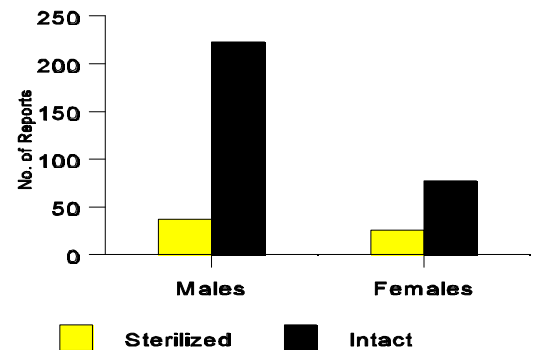


Figure 3. Sex of canines involved in severe animal attacks - 1997

Animal's Behavior

The animal's behavior prior to the attack was listed in 570 reports. The animal was described as docile or friendly in 362 cases (63.5%). In 223 reports, the animal displayed warning signals (such as barking, growling, hissing, curling lip, or baring teeth) prior to the attack. Of the 599 reports stating whether multiple animals were involved, 55 (9.2%) incidents involved an attacking animal that was part of a larger group of animals while in 544 (90.8%) incidents, the animal acted alone.

Rabies Vaccination Status

The animal's rabies vaccination status was specified in 491 reports involving canines (domestic dogs and wolf-dog hybrids) or domestic cats. Of these, 249 (50.7%) were not currently vaccinated and 242 (49.3%) were currently vaccinated. Almost one-third (217) of all reports involving canines or domestic cats did not specify whether the animal was vaccinated (Figure 4).

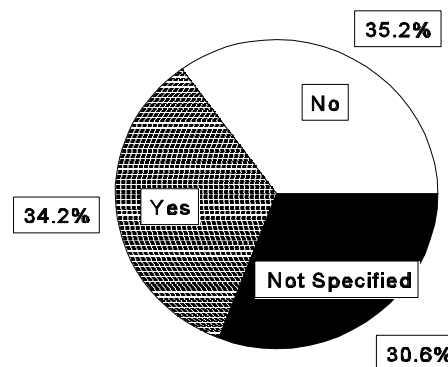


Figure 4. Rabies vaccination status of canines & domestic cats involved in severe animal attacks - 1997

Animal Involved in Previous Attack

Of the 425 reports in which it was definitely known whether or not the animal was involved in previous attacks on people or animals, 335 (78.8%) had not been involved in previous attacks and 90 (21.2%) had been involved in previous attacks. Of the 66 reports that included information on whether the previous attacks were against people or animals, 59 animals had been involved in attacks against people, 4 had been involved in attacks against other animals, and 3 had been involved in attacks against both people and animals.

Provocation/Special Circumstances

Circumstances described in 326 (44.7%) reports included situations in which the attack could be considered provoked. No association was found between the victim's age and whether the attack was provoked. Special circumstances involved in the attacks included (in order of frequency) being startled, guarding, dog fight, hunger/eating, teasing, injury, puppies/kittens, and estrus.

Extent of Injury

Of the 266 reports in which the extent of injury was specified, 51 (19.2%) attack victims required surgery, 71 (26.7%) required hospitalization, and 207 (77.8%) required sutures.

When only reports in which the victim was hospitalized were reviewed, 30 dog breeds or breed crosses were included in 61 reports. Of these, 6 breeds and breed crosses were involved in 52.5% of the attacks (Table 2). No other single breed or breed cross represented more than 4% of the reports.

<u>Breed</u>	<u>No.</u>	<u>%</u>
Rottweiler	8	13.1
Chow chow	7	11.5
German shepherd	5	8.2
Labrador retriever	5	8.2
Chow cross	4	6.6
Pit bull	3	4.9
All others	29	47.5

Table 2. Dog breeds involved in severe attacks in which the victim was hospitalized - 1997

Victim's Sex and Age

In the 728 records that specified the victim's sex, 386 victims (53.0%) were males and 342 victims were females (47.0%). These percentages remained relatively constant over the entire age range of the victims. The victim's age was listed on 710 records. Children less than 11 years of age represented 43.6% of all victims (Table 3). The mean age was 23.7 years, the median was 13.0 years, and the mode was 4.0 years (Figure 5). When considering the overall population of Texas, children less than 11 years of age were 3.6 times more likely than the remainder of the population to be a victim of a severe animal attack.

<u>Age</u>	<u>No.</u>	<u>%</u>
<6	160	22.5
6-10	149	21.0
11-19	116	16.3
20-59	212	29.9
>59	73	10.3

Table 3. Age of victims of severe animal attacks - 1997

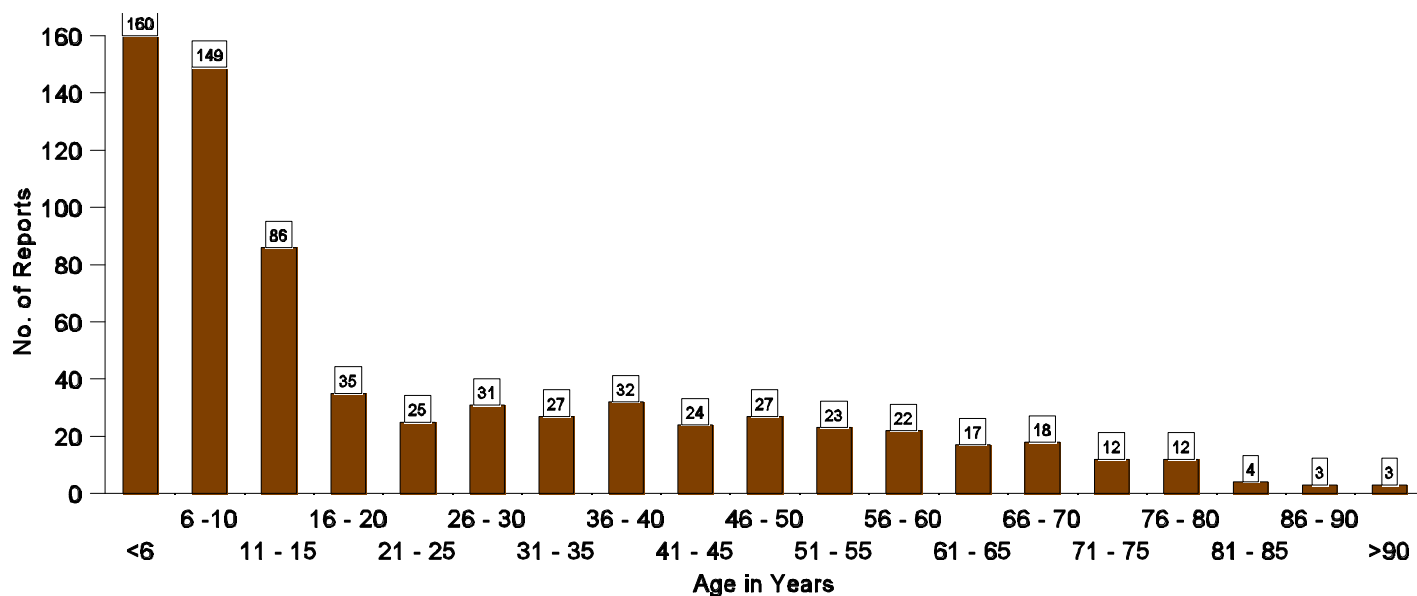


Figure 5. Age of victims of severe animal attacks - 1997

Anatomic Location of Injury

Many of the attack victims received wounds at multiple anatomic locations. Of the 719 reports that specified the site of injury, the following sites were listed:

208 (28.9%) involved the legs
 190 (26.4%) involved the head
 187 (26.0%) involved the hands
 158 (22.0%) involved the arms
 97 (13.5%) involved the torso
 17 (2.4%) involved the neck
 14 (1.9%) involved the feet

When the site of injury is compared to age, the percent experiencing trauma to the head decreases significantly as the victim's age (and presumably height) increases (Figure 6). Children less than 11 years of age were victims in 43.6% of the severe attacks, yet sustained 76.3% of the head injuries (Table 4).

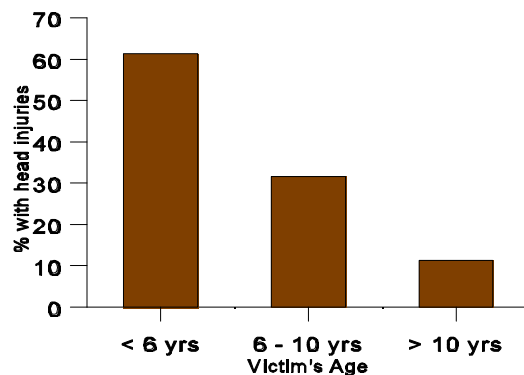


Figure 6. Comparison of victim's age to percent receiving head trauma from a severe animal attack - 1997

<u>Age</u>	<u>Number with head trauma</u>	<u>% of age group with head trauma</u>	<u>% of all head trauma</u>
<6	98	61.3	51.6
6-10	47	31.5	24.7
>10	45	11.2	23.7

Table 4. Age of severe attack victim receiving head trauma - 1997

High Risk Occupation

Thirty-nine reports included victims who were engaged in what would typically be considered a high risk occupation or hobby for animal bites, including:

- utility worker (6)
- animal control officer (5)
- veterinary technician (5)
- firefighter (4)
- law enforcement officer (3)
- delivery person (3)
- animal trainer/breeder (2)
- postal worker (2)
- animal foster owner (1)
- biker (1)
- carpenter (1)
- dog groomer (1)
- handing out business pamphlets (1)
- home health aid (1)
- horse coachman (1)
- jogger (1)
- trapper (1)

Charges Filed

Of the 708 reports involving canines (domestic dogs and wolf-dog hybrids) and domestic cats, charges were filed against the animal's owner in 46 (6.5%) reports. Twelve reports contained multiple violations. The violations were as follows:

<u>Number of reports</u>	<u>Violation</u>
24	animal-at-large
27	failure to vaccinate against rabies
5	dangerous/vicious dog
2	failure to license

Recommendations

A review of the surveillance data can help formulate prevention strategies. As with many other public health efforts, education and legislation are two key components in reducing the frequency of animal bites.

Education

- ▶ Educational efforts can originate from humane organizations, animal control agencies, schools, family care practitioners, veterinarians, and parents.
- ▶ Children should be taught to understand basic canine behavior and to avoid circumstances that may evoke an angry response from a dog.
- ▶ Informed dog owners, through their interaction with their pets, can reduce the likelihood of owning an animal that will bite. Lack of socialization, improper training, abuse, and failure to observe early signs of aggression can all contribute to a dog attack.
- ▶ Breeds that have a reputation for being unpredictable or aggressive should be avoided, particularly by families with children.
- ▶ Obstetricians and pediatricians should advise parents that infants and young children should never be left unsupervised around any dog, even the family pet, regardless of how friendly the dog may appear. Extra attention should be lavished on the family dog when a new baby is brought into the home so the pet does not feel “jealous” or that its position is being threatened.
- ▶ Although Texas’ data is insufficient to draw such a conclusion, other studies have shown that male dogs that have been castrated are less likely to be involved in a bite incident. Veterinarians should promote surgical sterilization for safety reasons as well as the health benefits to the animal and prevention of pet overpopulation.

Legislation

- ▶ Although reports indicated that approximately half of the biting dogs and cats were not currently vaccinated against rabies, citations were issued in only 6% of the cases (despite a Texas law that states that failure to vaccinate dogs and cats annually is a Class C misdemeanor). Increased enforcement of this law and existing local leash laws may provide incentives for dog owners to act responsibly.
- ▶ Where community laws are lacking, local leash and nuisance laws should be enacted and enforced.
- ▶ Local ordinances can be developed to offer incentives (such as decreased licensing fees) for owners whose dogs complete a dog obedience class.
- ▶ Local law enforcement agencies should enforce the Texas Dangerous Dog Act (Chapter 822 of the Texas Health and Safety Code), which is designed to minimize human exposure to dogs deemed to be dangerous.
- ▶ Texas residents should be encouraged to report all bites to the Local Rabies Control Authority (as mandated by Chapter 826 of the Texas Health and Safety Code). Reported rates influence public health policies in such matters as leash laws, impoundment of strays, amount of money allocated for animal control, and rabies vaccination programs for both pets and people.
- ▶ Chapter 828 of the Texas Health and Safety Code requires surgical sterilization of all animals adopted from animal shelters in cities with populations greater than 10,000 and counties with populations greater than 20,000.

